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**REMOVAL SITE EVALUATION STEAM AND
CONDENSATE LIEN REPLACEMENT
OCTOBER 1990**

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RSE

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REMOVAL SITE EVALUATION

STEAM AND CONDENSATE LINE REPLACEMENT

Feed Materials Production Center

U. S. Department of Energy

October, 1990

INTRODUCTION

The Steam and Condensate Line Replacement Project involves the replacement of existing deteriorated steam and condensate lines in the southern non-process area of the FMPC. Steam line tie-ins will be made in the process areas south of plant #6 and south of plant #8 (ref. maps 1&2 attached). Areas affected by this project include the Service Building (#11), Administration Building (#14), EH&S Building, (#53a) Invivo Building (53b), Security Building (#28a), Human Resource Building (#28b), the Sewer Lift Station (#22b), and the Garage (#31).

In order to accomplish this project, more than one (1) cubic feet of soil must be excavated. The soil will be handled according to the FMPC Site Procedure #720. Also associated with this project is the removal of approximately one hundred (100) pounds of insulation material containing asbestos, which will be packaged and shipped per WMOO Industrial Hygiene procedure IH&S-IH-03.

This Removal site Evaluation (RSE) has been completed by the DOE under authorities delegated by Executive Order 12580 under Section 104 of CERCLA and is consistent with Section 300.410 of the National Oil and Hazardous Substance Pollution Contingency Plan (NCP). This RSE addresses soil containing above background levels of total uranium and insulation material containing asbestos. This RSE has been completed to support the decision as to whether the Steam and Condensate Line Replacement Project conditions warrant a removal action.

SOURCE TERM

Site characterization and history records reviews were performed relative to the project work areas and the soil.

As part of the site characterization activities, surface and subsurface soil sampling was performed along the proposed excavation areas. Also, bulk asbestos samples were taken from the existing steam line tie-in points. The location and analytical results from some of these samples are provided on table #1.

As indicated by these analytical results, some of samples contain above background levels of total uranium. Also, in reference to the attached Analytical Data Sheets, some samples from the insulation material indicated the presence of asbestos. The aforementioned procedures will adequately address the handling and disposal of these materials.

Soil sampling for this project was also taken to determine the chemical composition of the soil at various points of the work areas. The results of these samples are pending and will be submitted as an addendum to the RSE at a later date.

Historically, these areas have never been used to store or traffic process chemicals or materials; therefore, there is no reason to expect the detection of hazardous chemicals in the samples taken.

EVALUATION OF THE MAGNITUDE OF THE POTENTIAL THREAT

On the basis of the above referenced data, the Steam and Condensate Line Replacement project does involve evaluation of elevated concentrations of hazardous substances to insure that the action will not result in a release or a substantial threat of release of hazardous substances into the environment.

ASSESSMENT OF THE NEED FOR REMOVAL ACTION

Consistent with Section 40 CFR of the National Contingency Plan (NCP), the Department of Energy shall determine the appropriateness of a removal action. Eight factors to be considered in this determination are listed in the NCP, 40 CFR 300.415 (b) (2). The following apply specifically to the concentration of total uranium occurring in the soil to be excavated and the demolition of insulating material containing asbestos:

40 CFR 300.415 (b) (2) (iv)

High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface that may migrate.

40 CFR 300.415 (b) (2) (v)

Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.

Based on the sampling data presented herein, these two of the eight factors listed in the NCP may be applicable to the Steam and Condensate Line Replacement project.

APPROPRIATENESS OF A RESPONSE

If it is determined that a response action is appropriate due to the levels of contamination found in the soil and the potential threat associated with the asbestos contaminants, a removal action may be required to address the existing situation.

If a planning period of less than six months exists prior to initiation of a response action, DOE will issue an Action Memorandum. The Action Memorandum will describe the selected response and provide supporting documentation for the decision.

If it is determined that there is a planning period greater than six months before a response is initiated, DOE will issue an Engineering Evaluation/Cost Analysis (EE/CA) Approval Memorandum. This memorandum is to be used to document the threat of public health and the environment and to evaluate viable alternative response actions. It will also serve as a decision document to be included in the Administrative Record.

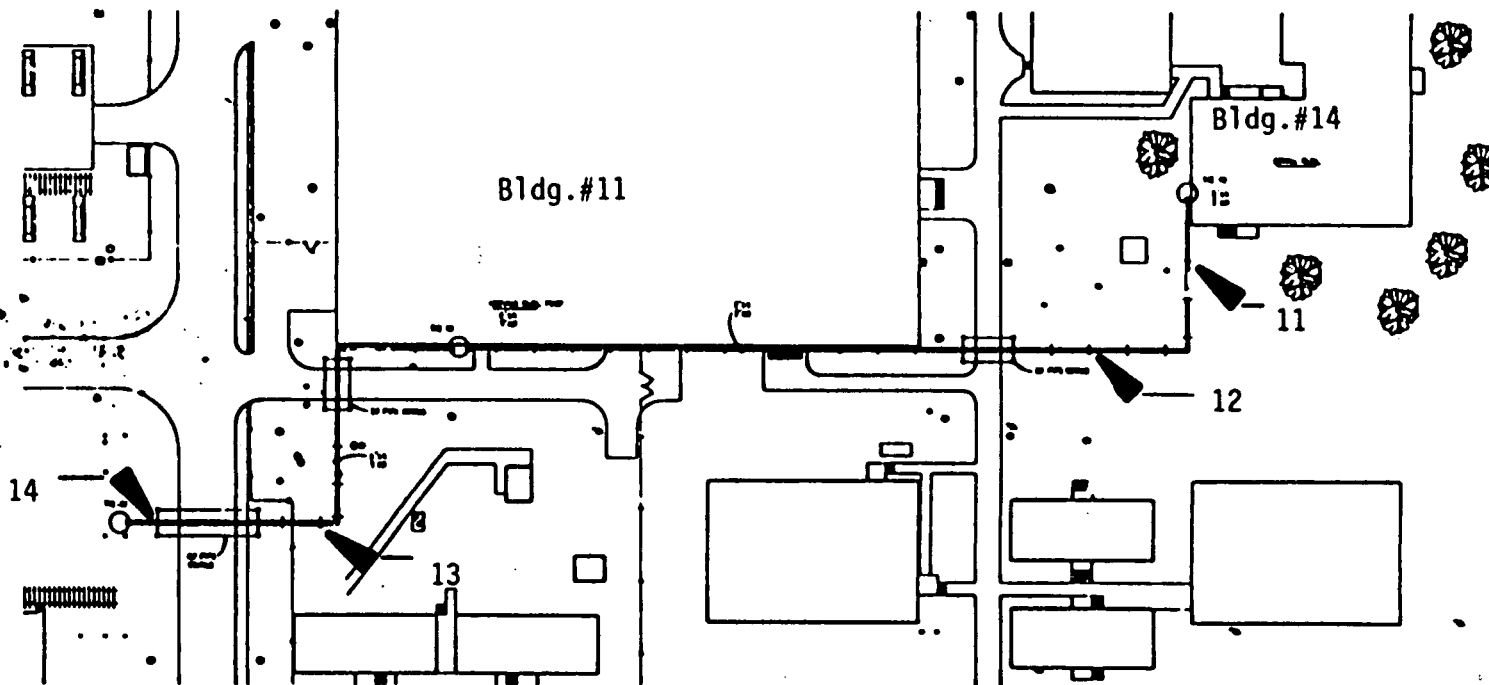
Significant site characterization activities completed to support the Steam and Condensate Line Replacement project indicate that no significant concentrations of hazardous substances are present in the environment at the proposed project. Site procedures #720 and IH&S-IH-03 adequately address concerns associated with potential releases. Therefore, there is no significant threat of contaminant release to the environment associated with this project and a Removal Action is not required.

TABLE #1
Soil Sample Results

Steam and Condensate Line Replacement PA #00-90101		
Location	Sample #	Total Uranium (pCi/gm)
1	1144	32
	1145	
2	1147	_____
	1148	
3	1150	41
	1151	
4	1153	110
	1154	
5	1156	56
	1157	
6	1159	54
	1160	
7	1162	260
	1163	
8	1165	_____
	1166	
9	1168	51
	1169	
10		
11	1171	
	1172	_____
12	1174	
	1175	
13	1176	
	1177	
14	1179	
	1180	



Bldg #8



MAP #2

PRELIMINARY

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										VERTICAL SCALE OF 1" = 10'		HORIZONTAL SCALE OF 1" = 10'	
										W		P	
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FMPC
OPERATIONS SAFETY & HEALTH - ANALYTICAL LABORATORY
ANALYTICAL DATA SHEET

1669

ORIGINATING ORGANIZATION				ANALYTICAL CHEMISTRY SECTION															
LN. NO.:	SAMPLE NOS.:	DATE COLLECTED:	BY:	ROUTE TO:	DATE RECEIVED:	BY:													
	8	3-9/8-10	GAS	RRG	4-12-90	CLA													
LOCATION:		TYPE OF SAMPLE:		ANALYZED FOR		DATE REPORTED:													
VARIOUS HI-LINES		BULK		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>F</td> <td>Alpha</td> </tr> <tr> <td>U</td> <td>Beta</td> </tr> <tr> <td>NO₂</td> <td>Ra</td> </tr> <tr> <td>OII</td> <td>pH</td> </tr> <tr> <td>Be</td> <td>Th</td> </tr> <tr> <td>Cl</td> <td>TSS</td> </tr> </table>		F	Alpha	U	Beta	NO ₂	Ra	OII	pH	Be	Th	Cl	TSS	4-12-90	
F	Alpha																		
U	Beta																		
NO ₂	Ra																		
OII	pH																		
Be	Th																		
Cl	TSS																		
REMARKS:				METHOD OF ANALYSIS:															
A0619, 35, 37, 38 + 39 samples of line to be re-moved/reworked at 1st + B and 1st + B.				PLM															
A0640 + 642 at item leak above tank F-101 SW of Pilot Plant - A0641 is a good/light leak				BY: NKE															
SAMPLE NO.		HOUR		SAMPLE DESCRIPTION		COUNTING DATA:													
						BKGD	GEO												
				Asbestos %	Other Fibers?	NonFibrous?													
A0619		WEST VERTICAL DROP AT 1ST + B		Positive 20% Chrys	Fiberglass 10%	Perlite	70%												
A0635		EAST VERTICAL DROP NEAR 1ST + B		Negative	Cellulose 30%	Carb.	60												
A0637		ELBOW AT TOP OF EAST VERTICAL TO HORIZONTAL NEAR 1ST + B		Pos. 20% Chrys.	Synthetic 10%	Perlite	70												
A0638		VERTICAL TO HORIZONTAL ELBOW AT TOP OF WEST VERTICAL DROP NEAR 1ST + B		Pos 15% Chry.	Fiberglass 10%	Perlite	70												
A0639		HORIZONT. TO HORIZONT. ELBOW AT TOP OF WEST VERTICAL DROP NEAR 1ST + B		Pos 10% Chry	Fiberglass 15	Perlite	Other 25												
A0640		SOUTH LINE ABOVE TANK F-101 AT SW WEST LEAVE		Neg	Cell 30	Carb.	60												
A0641		NW LINE ABOVE TANK F-101 AT SW P.P.		Neg	Synth. 20	Carb.	60												
A0642		SOUTH LINE ABOVE TANK F-101 AT SW PP EAST OF SMALL VALVE		Neg	Cell 35	Carb.	60												
					Synth. 5														
					Cell 20														
					Synth. 30														

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